

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Amended) A semiconductor device including a thin film transistor comprising:

- a semiconductor film formed on an insulating surface;
- an insulating film ~~[[on]]~~ over the semiconductor film;
- a gate electrode~~[[on]]~~ over the insulating film;
- said the semiconductor film including:
- a channel forming region overlapped with the gate electrode;
- an impurity region in contact with the channel forming region,
- wherein the impurity region has a concentration distribution in which an impurity concentration is increased with distance from the channel forming region.

2. (Amended) A semiconductor device including a thin film transistor comprising:

- a semiconductor film on an insulating surface;
- an insulating film ~~[[on]]~~ over the semiconductor film;
- a gate electrode ~~[[on]]~~ over the insulating film;
- said semiconductor film including:
- a channel forming region overlapped with the gate electrode;
- an offset region in contact with the channel forming region;
- an impurity region in contact with the offset region,
- wherein the impurity region has a concentration distribution in which an impurity concentration is increased with distance from the channel forming region.

3. (Original) A device according to claim 1,

wherein the impurity region has the concentration distribution in which the impurity concentration is continuously increased with distance from the channel forming region.

4. (Original) A device according to claim 1,

wherein the impurity region has a concentration distribution in which an impurity concentration is increased with distance from the channel forming region in a channel length direction.

5. (Original) A device according to claim 1,

wherein the thin film transistor is an n-channel thin film transistor.

6. (Original) A semiconductor device comprising:

a pixel portion and a driving circuit on an insulating surface;

an n-channel thin film transistor and a p-channel thin film transistor in the driving circuit;

a pixel thin film transistor including a semiconductor film in the pixel portion;

said semiconductor film including a channel forming region and an impurity region;

a pixel electrode connected to the pixel thin film transistor in the pixel portion,

wherein the impurity region has a concentration distribution in which an impurity concentration is increased with distance from the channel forming region.

7. (Original) A device according to claim 6, further comprising:

a gate electrode in the n-channel thin film transistor, said gate electrode having a taper portion;

an impurity region in the n-channel thin film transistor,
wherein the taper portion is overlapped with the impurity region with an insulating film interposed therebetween.

8. (Original) A device according to claim 6, further comprising:
an offset region between the channel forming region and the impurity region in the pixel thin film transistor.

9. (Amended) A device according to claim 6, further comprising:
a gate electrode in the pixel thin film transistor,
wherein the gate electrode is not overlapped with the ~~channel-forming~~ impurity region with an insulating film interposed therebetween in the pixel thin film transistor.

10. (Original) A device according to claim 1,
wherein the gate electrode includes a first conductive layer and a second conductive layer on the first conductive layer.

11. (Original) A device according to claim 1,
wherein the impurity region includes one of a source region and a drain region.

12. (Original) A device according to claim 1,
wherein the concentration distribution is an exponential distribution.

13. (Original) A device according to claim 1,

wherein the concentration distribution is a normal distribution.

14. (Original) A device according to claim 1,

wherein the concentration distribution is a linear distribution with a tilt.

15. (Currently Amended) A device according to claim 1,

wherein the impurity concentration is concentration of an impurity to impart ~~[[an]]~~ a one conductivity type to the semiconductor film.

16. (Original) A device according to claim 1,

wherein the semiconductor device is a liquid crystal module.

17. (Original) A device according to claim 1,

wherein the semiconductor device is an EL module.

18. (Original) A device according to claim 1,

wherein the impurity region is formed on both sides of the channel forming region.

19. (Original) A device according to claim 1,

wherein a thickness of the insulating film is different between a first region at a largest distance from the channel forming region and a second region at a smallest distance therefrom.

20. (Original) A device according to claim 1,

wherein the impurity region includes a first portion and a second portion,

wherein the impurity concentration is increased in the first portion while the impurity concentration is constant in the second portion,

wherein the first portion has a length in a range of 1 μm or more in a channel length direction.

21. (Original) A device according to claim 1,

wherein the semiconductor device is one selected from the group consisting of a video camera, a digital camera, a projector, a goggle type display, a car navigation system, a personal computer and a portable information terminal.

22-23. (Canceled)

24. (Original) A device according to claim 2,

wherein the impurity region has the concentration distribution in which the impurity concentration is continuously increased with distance from the channel forming region.

25. (Original) A device according to claim 2,

wherein the impurity region has a concentration distribution in which an impurity concentration is increased with distance from the channel forming region in a channel length direction.

26. (Original) A device according to claim 2,

wherein the thin film transistor is an n-channel thin film transistor.

27. (Original) A device according to claim 2,
wherein the gate electrode includes a first conductive layer and a second conductive layer
on the first conductive layer.

28. (Original) A device according to claim 2,
wherein the impurity region includes one of a source region and a drain region.

29. (Original) A device according to claim 2,
wherein the concentration distribution is an exponential distribution.

30. (Original) A device according to claim 2,
wherein the concentration distribution is a normal distribution.

31. (Original) A device according to claim 2,
wherein the concentration distribution is a linear distribution with a tilt.

32. (Currently Amended) A device according to claim 2,
wherein the impurity concentration is a concentration of an impurity to impart [[an]] a
one conductivity type to the semiconductor film.

33. (Original) A device according to claim 2,
wherein the semiconductor device is a liquid crystal module.

34. (Original) A device according to claim 2,

wherein the semiconductor device is an EL module.

35. (Original) A device according to claim 2,

wherein the impurity region is formed on both sides of the channel forming region.

36. (Original) A device according to claim 2,

wherein a thickness of the insulating film is different between a first region at a largest distance from the channel forming region and a second region at a smallest distance therefrom.

37. (Original) A device according to claim 2,

wherein the impurity region includes a first portion and a second portion,

wherein the impurity concentration is increased in the first portion while the impurity concentration is constant in the second portion,

wherein the first portion has a length in a range of 1 μm or more in a channel length direction.

38. (Original) A device according to claim 2,

wherein the semiconductor device is one selected from the group consisting of a video camera, a digital camera, a projector, a goggle type display, a car navigation system, a personal computer and a portable information terminal.

39. (Original) A device according to claim 6, further comprising:

a gate electrode in the pixel thin film transistor,

wherein the gate electrode includes a first conductive layer and a second conductive layer
on the first conductive layer.

40. (Original) A device according to claim 6,
wherein the impurity region includes one of a source region and a drain region.

41. (Original) A device according to claim 6,
wherein the concentration distribution is an exponential distribution.

42. (Original) A device according to claim 6,
wherein the concentration distribution is a normal distribution.

43. (Original) A device according to claim 6,
wherein the concentration distribution is a linear distribution with a tilt.

44. (Currently Amended) A device according to claim 6,
wherein the impurity concentration is a concentration of an impurity to impart [[an]] a
one conductivity type to the semiconductor film.

45. (Original) A device according to claim 6,
wherein the semiconductor device is a liquid crystal module.

46. (Original) A device according to claim 6,
wherein the semiconductor device is an EL module.

47. (Original) A device according to claim 6,

wherein the impurity region is formed on both sides of the channel forming region.

48. (Original) A device according to claim 6, further comprising:

an insulating film on the semiconductor film in the pixel thin film transistor,

wherein a thickness of the insulating film is different between a first region at a largest distance from the channel forming region and a second region at a smallest distance therefrom.

49. (Original) A device according to claim 6,

wherein the impurity region includes a first portion and a second portion,

wherein the impurity concentration is increased in the first portion while the impurity concentration is constant in the second portion,

wherein the first portion has a length in a range of 1 μm or more in a channel length direction.

50. (Original) A device according to claim 6,

wherein the semiconductor device is one selected from the group consisting of a video camera, a digital camera, a projector, a goggle type display, a car navigation system, a personal computer and a portable information terminal.